

Assessing the sustainability and adaptive capacity of the gooseneck barnacle co-management system in Asturias, N. Spain

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Abstract

The gooseneck barnacle fishery in Asturias (N. Spain) has undergone three important changes: (1) the early implementation of a co-management system based on Territorial User Rights for Fishing, (2) a change in management measures (due to a decrease in landings), and (3) an economic crisis. This has allowed us to analyze the systems' sustainability in time through examining five critical variables: landings, effort, catch per unit effort (CPUE), mean market prices, and annual revenue. Additionally, we used focus groups and questionnaires to determine the response of the system to these three changes. Co-management has succeeded in maintaining or increasing CPUE throughout all management areas and produced stable mean market prices. This was achieved through flexible management policies and adaptive strategies adopted by the fishers, such as increased selectivity and diversification. The analysis of this fishery provides important lessons regarding the need to understand the evolutionary dynamics of co-management and the importance of embracing adaptive capacity..

Keywords

Adaptive capacity, Sustainability, Social–ecological system, Change, Gooseneck barnacle.